

### **REMARKS**

In summary, claims 1-19 are pending. Claims 1-19 are rejected under 35 U.S.C. §101. Claims 1, 4, and 13-16 are rejected under 35 U.S.C. §102. Claims 5-9 are rejected under 35 U.S.C. §103. Applicants respectfully traverse all rejections. Claims 4, 6, and 13 are amended. No new matter is added.

#### **Telephone Conversation With Examiner**

Applicant's representative thanks Examiner Pham for the telephone conversation conducted on February 22, 2007. During the conversation, Applicant's representative inquired about the claims rejected under 35 U.S.C. § 101. Specifically, Applicant's representative asked why claims directed to a system were being rejected as non-statutory subject matter under 35 U.S.C. § 101. Examiner Pham explained that, according to the USPTO's most recent directive, a component of a system claim must comprise hardware. Examiner Pham did say, however, that referencing the specification to show that a claimed system component comprises hardware may overcome the rejection.

Applicant's representative also discussed the rejection of claims under 35 U.S.C. § 102. Applicant's representative explained that according to his interpretation of the Kamvar reference, Kamvar's teaching (at paragraph 0026) of personalization weights differs from a personalization description v describing a set of preferences among the web pages, as claimed. Applicant's representative explained that the Kamvar reference teaches that a matrix can be partitioned into sub-matrices and the weights used to form the sub-matrices can be determined by various mathematical means. And, the Kamvar reference states that these mathematically calculated weights could be customized to an individual to form personalization weights. Applicant's representative stated that Kamvar's personalization weights are not a personalization description v describing a set of preferences among the web page. Examiner Pham indicated that he would keep this distinction in mind when examining the response.

**Claim Rejections - 35 U.S.C. §101**

Claims 1-19 are rejected under 35 U.S.C. § 101. Claims 1-3 and 13-15 are characterized as reciting a system that lacks the necessary physical articles or objects.

Per the discussion with Examiner described above, Applicant points to the specification to show that a component of the system recited in claim 1 comprises hardware. Claim 1 recites “a database,” which comprises hardware. The fact that a database comprises hardware is supported throughout Applicant’s application. For example, paragraph 0005 recites: “the system comprising a database for storing connectivity information about the web pages...” In order for the database to store connectivity information, the database inherently comprises memory - hardware. Further, at paragraph 0033 with reference to Figure 2, it is stated that a server 222 is connected to a database 224. And the database 224 is depicted a hardware device in Figure 2.

Claim 13 is herein amended to recite “a processor comprising an object-grading engine,” and thus is directed to hardware. Because claim 1 and amended claim 13 are directed to a system comprising a hardware component, it is requested that the rejection, under 35 U.S.C. § 101, of claims 1-3 and 13-15 be reconsidered and withdrawn.

Claims 4-12 and 16-19 are characterized as merely reciting a number of computing steps without producing any useful, concrete and tangible result which results in a practical application. Claim 4 is herein amended to recite “rendering an indication of at least one graded object.” Claim 16 recites “a computer-readable storage medium.” Thus, claim 16 is directed to tangible, physical, embodiment. Accordingly, it is requested that the rejection, under 35 U.S.C. § 101, of claims 4-12 and 16-19 be reconsidered and withdrawn.

**Claim Rejections - 35 U.S.C. § 102**

Claims 1, 4, and 13-16 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Publication No. 2005/0033742 in the name of Kamvar *et al.* (hereinafter referred to as “Kamvar”).

Kamvar *et al.* neither discloses nor suggests several claim limitations. For example, Kamvar neither discloses nor suggests “a page-grading engine associated with an approximation matrix  $Q'$ ,” an approximation matrix  $Q'$ , where  $Q'$  approximates an ideal matrix  $Q$  with respect to the connectivity information,” “a personalization description  $v$  describing a set of preferences among the web pages,” “the page-grading engine ... grades search results with respect to  $Q'$  and  $v$ ,” and “the page-grading engine receives as input a personalization description  $v$ ,” as recited in claim 1.

Kamvar teaches a method for ranking nodes in large directed graphs. (Abstract). Kamvar nowhere mentions a page-grading engine. Kamvar teaches that a “block link matrix  $B$  represents the link structure of the reduced graph.” (Paragraph 0025). The matrix  $B$  taught in Kamvar is not “an approximation matrix  $Q'$ , where  $Q'$  approximates an ideal matrix  $Q$  with respect to the connectivity information.” Moreover, Kamvar nowhere discloses or suggests “a personalization description  $v$  describing a set of preferences among the web pages” or grading “search results with respect to  $Q'$  and  $v$ .”

Paragraph 0007 of Kamvar is cited, in the instant Office Action, to support the assertion that Kamvar discloses “a database for storing connectivity information about the web pages.” Applicant respectfully disagrees with this assertion. Kamvar does not teach storing connectivity information in a [linked] database. Rather, in paragraph 0007, Kamvar teaches that “it is possible to speed up the computation of ranks in an extremely large linked database by exploiting structural properties of the directed graph for the database.” Kamvar defines a linked database as “any database of documents containing mutual citation, such as the world side web or other hyper media archive.” (Paragraph 0004). Thus, Kamvar teaches speeding up computation pertaining to ranks of linked databases, but does not teach storing connectivity information about web pages in the database.

As mentioned above, Kamvar neither discloses nor suggests “a personalization description  $v$  describing a set of preferences among the web pages.” It is asserted in the instant Office Action that Kamvar discloses this limitation at paragraphs 0026-0027. Applicant respectfully disagrees with this assertion. Kamvar teaches that a matrix  $B$  is a reduced link matrix. (Paragraph 0025). “The matrix  $B$  can be calculated in various alternative

ways.” (Paragraph 0026). Kamvar teaches various ways to calculate the weights for the B matrix, and then states that “[t]he link matrix weights may also depend on personalization weights, resulting in block ranks that are customized to an individual.” [Emphasis Added] (Paragraph 0026). Thus, Kamvar’s personalization weights are merely an individual’s choice of weights used to calculate the B matrix. Kamvar’s personalization weights are not a personalization description v describing a set of preferences among the web page.

In view of the above arguments, remarks, and amendments, it is requested that the rejection, under 35 U.S.C. § 102, of claims 1, 4, and 13-16 be reconsidered and withdrawn.

**Claim Rejections - 35 U.S.C. § 103**

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamvar in view of an article entitled “Fast Computation of Low Rank Matrix Approximations” authored by Dimitris Achlioptis and Frank McSherry (hereinafter referred to as “Achlioptis *et al.*”). Combining Achlioptis *et al.* with Kamvar does not overcome the deficiencies of Kamvar. Accordingly, it is requested that the rejection, under 35 U.S.C. § 103, of claim 5 be reconsidered and withdrawn.

Claims 6-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kamvar and Achlioptis in view of U.S. Patent No. 6,285,999, issued to Page (hereinafter referred to as “Page”). Combining Page with Achlioptis *et al.* and Kamvar does not overcome the deficiencies of Kamvar. Accordingly, it is requested that the rejection, under 35 U.S.C. § 103, of claims 6-9 be reconsidered and withdrawn.

**Amendment To Claim 63**

Claim 6 is amended to correct a typographical error.

**CONCLUSION**

It is requested that the forgoing arguments, remarks, and amendments be entered, and in view thereof, it is respectfully submitted that this application is in condition for allowance.

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**PATENT  
REPLY FILED UNDER EXPEDITED  
PROCEDURE PURSUANT TO  
37 CFR § 1.116**

Reconsideration of this application and an early Notice of Allowance are respectfully requested. In the event that the Examiner cannot allow this application for any reason, the Examiner is encouraged.

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